

## Catalogue of American Amphibians and Reptiles.

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*Taricha*.

***Taricha* Gray**  
**Pacific newts**

*Taricha* Gray, 1850:25. Type-species *Triton torosa* Rathke in Eschscholtz, 1833, by subsequent designation.

*Paleotaricha* van Frank, 1955:4. Type-species *Paleotaricha oligocenica* van Frank, 1955, by original designation.

• CONTENT. Three extant (subgenus *Taricha*) and two extinct species (subgenus *Paleotaricha*) are recognized (Tihen, 1974).

• DEFINITION. Salamandrids with frontosquamosal arches and paraoccipital processes; dorsal opening of the *cavum internasale* is large and bordered anteriorly and laterally by unpaired premaxilla; phalangeal formula 1-2-3-2/1-2-3-3-2; tarsal basale formula 1+2,3,4,5; neural spine without dorsal expansion and with little if any pitting; tongue rounded, attached; glossal skeleton partly ossified; toes free, depressed; tail compressed; skin granular; light to dark brown above and yellow to bright red below; a well-developed unken reflex; during courtship males capture females from above, male clasps female in axillary region with his forelimbs; chromosome number (2N) = 22. The subgenus *Taricha* has vertebrae with relatively low neural spines without dermal caps; whereas the vertebrae of the subgenus *Paleotaricha* have relatively high neural spines with ornamented dermal caps.

• DESCRIPTIONS. Comparative descriptions and keys have been provided by Bishop (1943), Pickwell (1947), Riemer (1958), Smith (1978), Stebbins (1951, 1954, 1966), Twitty (1935, 1942, 1966), and Weaver (1963).

• ILLUSTRATIONS. The best comparative illustrations are in Stebbins (1951, 1954, 1966) and Smith (1978).

• DISTRIBUTION. Pacific newts range from southern Alaska to southwestern California, possibly to extreme northwestern Mexico.

• FOSSIL RECORD. van Frank (1955) described *Paleotaricha oligocenica* (= *Taricha oligocenica*) from a nearly complete fossil from the Upper Oligocene of western Oregon. Peabody (1959) described fossil trackways of *Taricha* sp. from Lower Pliocene deposits in the Sierra Nevada range of California. Miller (1971) found jaw fragments of *Taricha* sp. in Late Pleistocene deposits of the Los Angeles Basin, California. Tihen (1974) described *Taricha miocenica*, based on vertebrae, from Lower Miocene beds in Granite County, Montana.

• PERTINENT LITERATURE. The zoogeographic and phylogenetic affinities of *Taricha* have been discussed by Herre (1934, 1935, 1939), Mertens (1952), Steiner (1950), Tihen (1974), van Frank (1955), von Wahlert (1952a, 1952b, 1953, 1957), Wake and Özeti (1969), and Wolterstorff and Herre (1935). Courtship and the phylogeny of *Taricha* were discussed by Salthe (1967) and Davis and Twitty (1964). Twitty (1961a, 1961b, 1964, 1966) discussed hybridization, homing, orientation, and speciation for the *Taricha* complex. Electrophoretic patterns have been compared among the species (Ayala, 1975; Coates, 1967, 1968; Coates and Twitty, 1967; Hedgecock and Ayala, 1974; Salthe and Kitto, 1966; and Speaker, 1965). Tongue morphology was characterized by Özeti and Wake (1969), skulls by Larsen (1963), karyotypes by Seto and Pomerat (1965), and vertebrae and trunk musculature by Naylor (1978b). Naylor (1978a) suggested that the frontosquamosal arch of *Taricha* is a defensive adaptation. Pimentel (1958, 1959) suggested an alternative infrageneric classification which has not been supported by other taxonomists. Variation in toxicity has been compared for ovaries and skin (Mosher et al., 1964; Wakely et al., 1966; Brodie et al., 1974). Riemer (1958) and Brodie (1977) have contrasted antipredator postures.

• NOMENCLATURAL HISTORY. The species of *Taricha* have often been included in the genera *Diemictylus*, *Notophthalmus*, and *Triturus*. Although the generic name *Taricha* was established in 1850 by Gray, the diagnosis was inadequate. Herre

(1934) and Wolterstorff and Herre (1935) established *Taricha* as a distinctive group but their work was largely ignored by American herpetologists until the appearance of Schmidt's (1953) North American checklist.

• ETYMOLOGY. The name *Taricha* derives from *tarichos* (Gr.) meaning a mummy, or something preserved in salt.

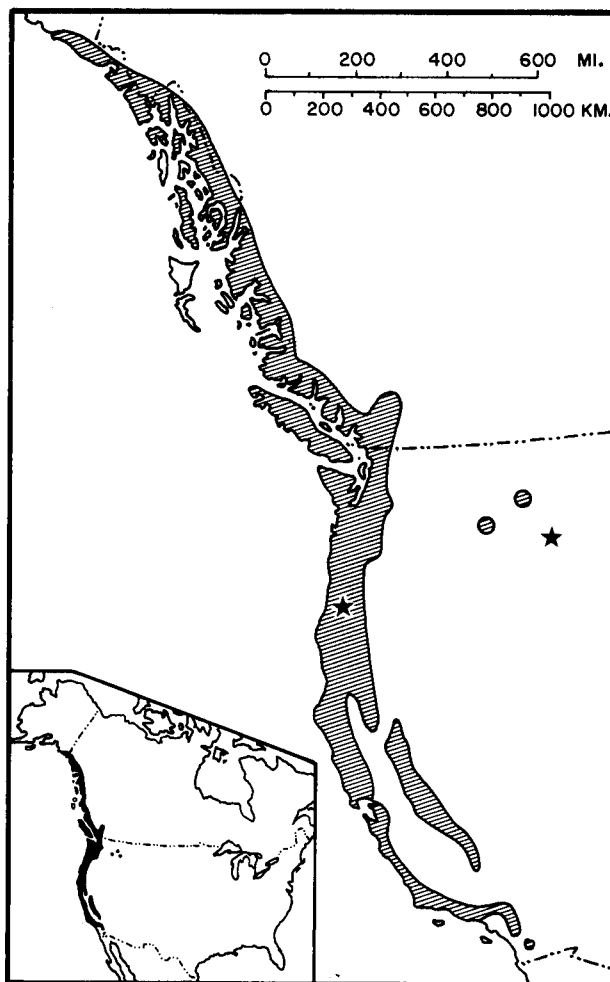
• KEY TO SPECIES. Following are keys to both adults and larvae; the parenthetic numerals following species names refer to accounts in this catalogue.

Mature, metamorphosed adults:

1. Iris of eye entirely dark; venter bright red; usually with a dark band across vent ..... *rivularis* (9)  
Iris with some light pigment; venter yellow to orange; usually without a dark band across vent ..... 2
2. Eyes large, projecting beyond profile of head when viewed from above; lower eyelid light colored; vomerine teeth in Y-shaped rows ..... *torosa* (273)  
Eyes small, not projecting beyond profile of head when viewed from above; lower eyelid dark; vomerine teeth in V-shaped rows ..... *granulosa* (272)

Larval forms:

1. Uniform dark, dorsolateral pigmentation; caudal fins fail to reach forelimbs ..... *rivularis* (9)  
Dorsolateral region striped or spotted; caudal fins usually extend forward to forelimbs ..... 2
2. Body with dark dorsolateral stripes ..... *torosa* (273)  
Body with two longitudinal rows of light spots on each side ..... *granulosa* (272)



MAP. Stars mark Oligocene and Miocene fossil records.

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